Library

The Maryland Fruit Grower

May, 1935

Maryland State
Horticultural Society

HUGE LOSSES FROM CODLING MOTH CAN BE STOPPED

• Many growers have practically ended Worm Damage by use of ORTHOL-K with Lead Arsenate for the cover sprays.

ORTHOL-K kills the eggs, reduces "stings" and makes it much more difficult for the worms to enter the fruit through the coating of Lead Arsenate.

Moreover, it has given good control of Red Mites, and Migratory Scale, and reduces Leafhopper injury to insignificance. It thus promotes tree vigor and productiveness and tends distinctly to increase sizing and coloring of the fruit.

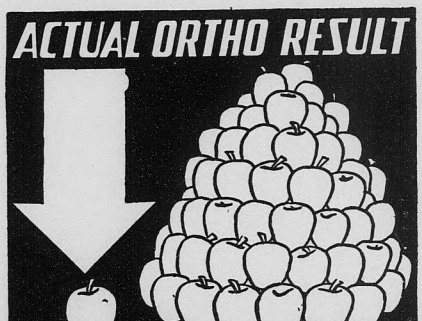
Combined with Nicotine Sulphate ORTHOLK-K has proven an economical substitute for Oil-Lead Arsenate, and is also a good all around clean-up for Red Mites, Scale, Aphids, Leafhoppers, Case Bearers, etc.

The ORTHO Program

The ORTHO Pest Control Program provides not only for these pests but for fungous diseases as well. By adding Improved Coposil to the ORTHOL-K-Lead Arsenate (or Nicotine) combination you protect your trees with a colloidal copper fungicide rated as safer than Bordeaux for Scab, Brooks' Fruit Spot, Blotch, etc.

Use ORTHO Spreader

It is an improved film-builder for use with Arsenical, Sulphur-Arsenical, Lime-Sulphur, Bordeaux, and other Copper Sprays as well as Oil-Lead Arsenate. It helps do a better spray job.



By the use of ORTHOL-K many growers get less than 1 wormy apple out of every 100

The 1935 ORTHO *Spray Bulletin gives you full information on the* ORTHO *All-Pest Control Program. Sent free.*

California Spray-Chemical Corp.
ELIZABETH, NEW JERSEY
NATIONAL STOCKYARDS, ILL.
2082-AA CENTER STREET, BERKELEY, CALIF.

DISTRIBUTORS: Central Chemical Company, Inc., Baltimore, Frederick, Hagerstown, Md.

ORTHOL-K

ORTHO
SCIENTIFIC PEST CONTROL

& Lead Arsenate with ORTHO Spreader

FOR CODLING MOTH

(and 'COPOSIL' for Scab, Brooks' Fruit Spot, etc.)

The Maryland Fruit Grower

Published Monthly by the Maryland State Horticultural Society

Edited by the Secretary, A. F. Vierheller, Extension Horticulturist

Vol. 5 **May, 1935** **No. 5**

IS FRUIT THINNING NECESSARY IN MARYLAND ORCHARDS?

By A. Lee Schrader, Pomologist
University of Maryland

Many growers of fruit in Maryland have adopted thinning of the prospective crop as a regular part of their orchard routine, when the set of fruit warrants the practice. The good results obtained in these orchards have adequately supported the experimental conclusions of investigators that thinning has a place in the hands of the progressive fruit grower. Other orchardists who do not thin should reconsider carefully the advantages derived from proper thinning of the fruits of the apple, peach, plum, pear and even the grape, in the light of the newer experimental evidence as well as from the standpoint of the greater pressure of the market demands for better quality of fruit and moreover from the lack of profit from the poorer grades. The greater use of nitrogen fertilizers in recent years has been designed to increase or at least maintain the growth and fruitfulness of the trees, but parts of the effect not usually emphasized lies in the increased set of fruit, and often an excessive set which should be corrected by thinning. A good set of fruit is always sought as evidenced by great attention to the use of bees and proper pollenizers, especially in late years. Thus the very agencies designed to insure a set of fruit also lead the grower further toward the necessity of thinning a heavy set of fruit.

Let us consider the advantages and disadvantages claimed for the thinning process. The practice no doubt is as old as the art of fruit culture and the benefits derived have been reiterated during the many years of observation and experiment. Curiously, after all the years of discussion, experiments on thinning occupy a major place in the experimental program of horticultural workers in the United States at the present time, and new facts are being sought to aid in evaluating the effects of thinning. Numerous experiments in the past, including some in Maryland. Auchter and White house (2), have demonstrated an increase in size of fruits following thinning, even late thinning, except under unusually favorable growing conditions, and this effect on size is uppermost in the mind of the grower when he considers thinning. Small fruit, of course, contributes a large percentage of the cull pile and the lower grades. But there are other results that have been accorded to thinning, such as improved color, reduction of blemished fruits, less limb breakage, lowered harvest costs, increased vigor of tree, and fruit bud formation for next year's crop, all of which have, especially in recent years, been backed by experimental evidence. The financial gain from increased size of fruit usually has been calculated, but it is evident that we must add much more to the black side of the ledger in favor of thinning.

In regard to the improvement of color by thinning, Fletcher (4) working with several varieties of apples in western Maryland has found that thinning was one of the best means that a grower could use to markedly increase

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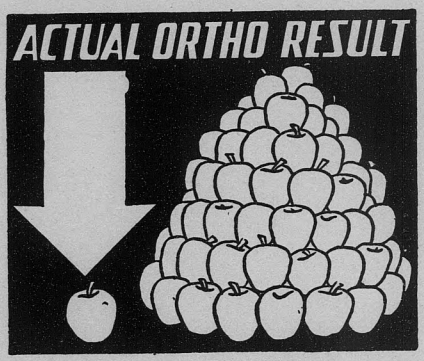

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In regard to the improvement of color by thinning, Fletcher (4) working with several varieties of apples in western Maryland has found that thinning was one of the best means that a grower could use to markedly increase

color, and that an excessive load of fruit was one of the biggest factors responsible for poor color. Likewise, Ellenwood and Howlett (3) reported from Ohio that the color increase in one year for Jonathan was almost sufficient to pay for the cost of the thinning, and improvement in the color of Grimes was quite marked, not red color but the golden color desired for this variety. Size increase of both varieties, but especially Grimes, was noteworthy in the Ohio Experiments, reported in 1932. More leaves per fruit, and more water per fruit no doubt are responsible for the favorable effects on both size and color.

The reduction in blemished fruits is accomplished in two ways—first, by the actual removal of such fruits in the thinning operation, and second, by the separation of fruits which permits better spray coverage, and practically eliminates the usual codling moth and oriental moth hazard where apples touch in a cluster or otherwise. Ellenwood and Howlett add a caution in regard to blemishes on Yellow Transparent or other tender skinned varieties, in that the dropping of thinnings through the tree causes bruising of the young fruits in the lower part of the tree, and such bruises show up markedly at harvest. Thinnings of such varieties at least should be thrown clear of the tree.

Shoemaker (9) reported the limb breakage of peach trees occurred with unthinned trees even though propped while thinned trees with somewhat less crop had no breakage and required less props. Ellenwood and Howlett (3) also showed that the cost of the props for the unthinned trees would have paid for a great deal of thinning. Breakage from an overload of fruit is often difficult and costly to repair, especially when the trunk of the tree is split. A split trunk of a peach tree usually means the removal of the tree. One grower in Maryland went to considerable expense to repair the trunks of bearing Stayman trees with cement inlays. If the tops of trees are broken as often happens with an overload, sunscald always follows on the larger exposed limbs near the break with the serious weakness resulting.

The reduction in harvesting cost lies not only in the fewer number of fruits to harvest and greater speed in harvesting larger fruits, but also in the subsequent handling of the crop. Auchter and Knapp (1) express the view that in balancing the costs of thinning versus the cost of handling unthinned apples at harvest time that the cost of thinning probably would become negligible. Murneek (6) estimated that the actual cost of thinning labor amounted to 2 to 4 cents per harvested bushel of apples, not discounting the extra harvesting costs for unthinned trees.

The effect of thinning on the vigor of the tree and on annual bearing has received great attention in recent years by investigators in several states. It was formerly believed that thinning could not correct the biennial bearing habit of an apple tree, but now there is evidence to the contrary. Murneek of Missouri has shown in several reports that fruiting is a severe drain upon the tree. Magness and his associates in the U. S. Department of Agriculture have led the way in showing the possibility of heavy early thinning to give fruit bud formation in a heavy crop year, so that annual bearing would result. Magness, Fletcher, and Aldrich (5) reported after the 1933 season that trees in good vigor in a biennial cropping habit would form fruit buds in the crop year if heavy thinning were done within 30 days after bloom. Such heavy thinning was much greater than is done in commercial practice, since 80 to 90 per cent of the fruits were removed and the crop was much reduced. Jonathan, Stayman Winesap, and Rome were more easily in-

fluenced than the usual biennial varieties as Yellow Transparent, York Imperial, Oldenburg, and Delicious. In 1934, Schrader and Vierheller (7) thinned heavily set trees of Stayman, Jonathan, and Grimes at Frederick and Colesville, removing 60-65 per cent of the fruits (about 50 leaves per fruit) with quite favorable results on Stayman and Jonathan but not on Grimes. It seems probable that Rome, Jonathan, Grimes, Stayman, and other so-called annual varieties can be made to bear annual crops under Maryland conditions if they are not allowed to bear excessive loads of fruit, which means a rather heavy early thinning and moderate to good vigor if the trees are biennial to start or if a heavy set occurs. Shoemaker (9) likewise showed with peaches that thinning was required in case of a heavy set to insure a crop for the next year.

Early thinning, therefore, is important for fruit bud formation especially with apples. Earliness also is very important from the standpoint of size response. The growth and development of fruits have been studied in detail, and it is found that the young fruits utilize food materials in considerable amounts, so that early removal means conservation of the tree's energy. Peaches make little growth (after an initial period of rapid growth) until the pit hardens which seem to give a longer period for peach thinning, but Shoemaker (9) and others report that early thinning just after the June drop is much better than a month later. However, even "spot picking" has a measurable effect upon the size of the remaining fruits.

The distance of thinning requires judgment on the part of the orchardist in relation to his local conditions, soil, varieties, and tree response. Usually he does not thin enough and must go over a second time. Too heavy thinning may reduce yields particularly with peaches, [Shoemaker (9)] but a slight reduction in yield may be offset in other gains, enumerated previously. Early peaches respond well to a thinning distance of about 6 inches and late peaches to 4 inches according to the Maryland work of Auchter and Whitehouse (2). Yellow Transparent and Grimes should be thinned much more heavily than usually is done, according to the experience in Maryland orchards. Jonathan should not be thinned too heavily or the keeping quality is impaired. Varieties for export trade may not be thinned at all to keep the fruit from becoming too large for the foreign market. A general apple thinning distance has been used of 6 to 8 inches which must be modified in accordance with conditions. The basis of leaf area per fruit is the ideal method but more difficult to apply. Thirty to forty leaves per fruit are satisfactory for apples and peaches with certain exceptions, notably Rome which requires less. With apples one could assume five good leaves per spur and thus thin to one apple to six or eight spurs. In any thinning, clusters should be broken up and one apple left per spur.

The terminal fruit of the cluster usually is larger and thus will make a larger fruit. Hence it should be the one left unless blemished. With peaches the larger fruits at thinning time are preferable to leave.

Plums respond particularly well to thinning, and should be thinned to at least 4 inches apart. Experiments at the Maryland Station by Schrader (8) indicate that Concord grapes can be thinned to improve quality without appreciable sacrifice in yield and with a distinct benefit to the vigor of the vine. Such thinning of grapes consists of removal of small or straggly clusters before blossoming and reduction in number of clusters to approximately 100 on strong vines. Such thinning will greatly aid harvesting and will insure

CONTROL *Simplify Removal* OF

● Satisfactory control of codling moth and the removal of lead and arsenic residues to within the established tolerance are possible if you will follow the 1935 Sherwin-Williams Codling Moth Spraying Schedule. We offer you four dependable products for use in your fight against Codling Moth—

S-W Arsenate of Lead
S-W Summer Mulsion
S-W Tar-O-Flakes
S-W Bandip

S-W SUMMER MULSION—A dependable white oil emulsion used successfully for many years to control codling moth eggs and to improve the coverage of Arsenate of Lead on apples.

S-W ARSENATE OF LEAD—A 98% pure lead arsenate without a "spreader" or astringent. Deposits more than 80 micrograms of arsenic per square inch of apple surface—the minimum amount necessary for the effective control of moth larvae.

S-W TAR-O-FLAKES--The original pine tar soap recommended for flocculating arsenate of lead to increase deposit in an even film over apple surface.

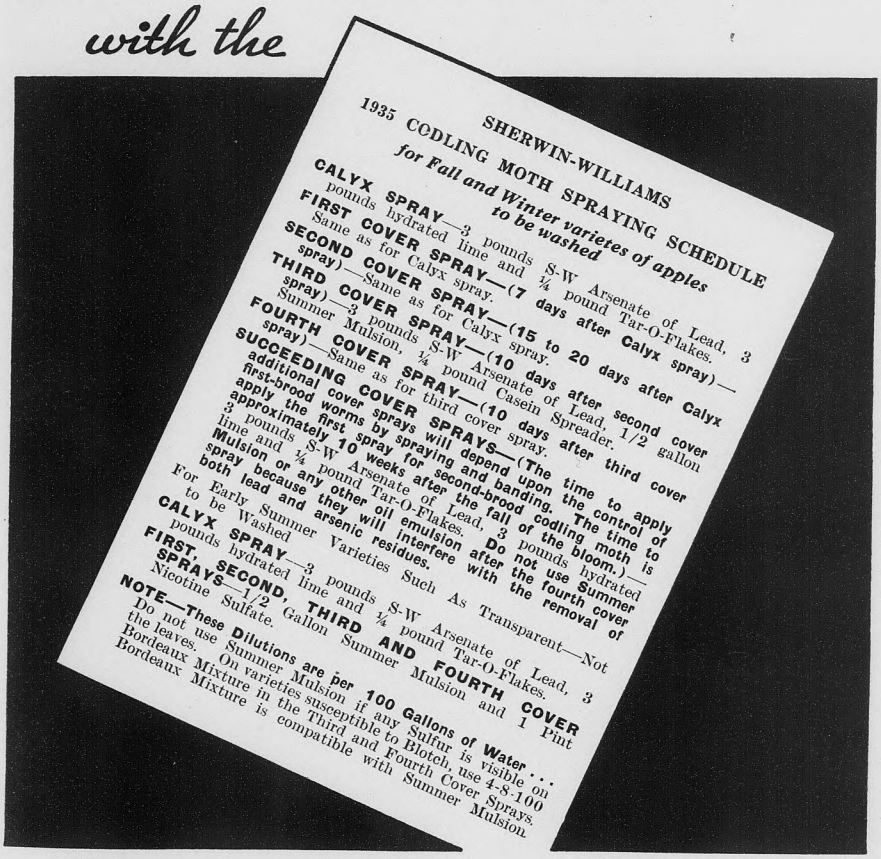
S-W BANDIP—The original cold mix ready-to-use combination of Beta-Napthol and lubricating oil recommended for dipping tree bands to destroy codling moth larvae.

USE THIS FREE CODLING MOTH CONTROL SERVICE

Our Spraying Service Department offers a new and practical plan for better Codling Moth Control. This plan will tell you *how* and *when* to spray, how to trap codling moths and band your trees to catch worms. If you want the latest, most practical detailed information on codling moth control, address

SHERWIN-
SPRAY AND DUST

CODLING MOTH AND LEAD AND ARSENIC *Residues* *with the*



SHERWIN-WILLIAMS
1935 CODLING MOTH SPRAYING SCHEDULE
for Fall and Winter varietes of apples to be washed

CALYX SPRAY—3 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and ¼ pound Tar-O-Flakes.

FIRST COVER SPRAY—(7 days after Calyx spray)—Same as for Calyx spray.

SECOND COVER SPRAY—(15 to 20 days after second cover spray)—Same as for Calyx spray.

THIRD COVER SPRAY—(10 days after third cover spray)—Same as for third cover spray. 1/2 gallon Summer Mulsion, ¼ pound Casein Spreader.

FOURTH COVER SPRAY—(10 days after the fourth cover spray)—Same as for third cover spray. 3 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and ¼ pound Tar-O-Flakes. 1 Pint Summer Mulsion or any other oil emulsion after the fourth cover spray because they will interfere with the removal of both lead and arsenic residues.

SUCCEEDING COVER SPRAYS—(The time to apply additional cover sprays will depend upon time to apply first-brood worms by spraying and banding. The time to apply the first spray for second-brood codling moth is approximately 10 weeks after the fall of the bloom.)—3 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and ¼ pound Tar-O-Flakes. Do not use Summer Mulsion on any other oil emulsion after the fourth cover spray because they will interfere with the removal of both lead and arsenic residues.

For Early Summer Varieties Such As Transparent—Not to be Washed

CALYX SPRAY—3 pounds S-W Arsenate of Lead, 3 pounds hydrated lime and ¼ pound Tar-O-Flakes.

FIRST, SECOND, THIRD AND FOURTH COVER SPRAYS—1/2 Gallon Summer Mulsion and 1 Pint Nicotine Sulfate.

NOTE—These Dilutions are per 100 Gallons of Water . . . Do not use Summer Mulsion if any Sulfur is visible on the leaves. On varieties susceptible to Blotch, use 4-8-100 Bordeaux Mixture in the Third and Fourth Cover Sprays. Bordeaux Mixture is compatible with Summer Mulsion.

Insecticide Department

THE SHERWIN-WILLIAMS CO.

101 PROSPECT AVENUE » » » CLEVELAND, OHIO

WILLIAMS MATERIALS

against over-bearing and its bad after effects on future crops.

The most rapid hand thinning is done with the thumb and first two fingers breaking the fruit from the stem without injuring the spur. Shears may be used in late thinning when the stems are tough, but Ellenwood and Howlett (3) report that shears are nearly one-third slower and also cause some bruising.

In conclusion, there seems to be many things to be said in favor of thinning and the grower faces the problem of financial outlay and available labor to do the work in the manner to give best results. Let us hope that the Maryland grower thins to advantage.

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PREPARATION AND USE OF CHEMICALLY TREATED BANDS FOR CODLING MOTH CONTROL

C. Graham, Department of Entomology
University of Maryland

The use of chemically treated bands has become a regular part of codling moth control practices with many orchardists, and we recommend them in all orchards where there was a heavy infestation of moths the previous year.

Treated band material may be bought from orchard supply companies, or if growers make their own banks, the information is given:

Equipment: The only equipment necessary in treating bands is a zinc tub or iron pot large enough to hold the material and allow the roll of bands to be dipped into it. A fifty-gallon oil drum cut in half may be substituted for the tub or pot. A gasoline stove or wood fire may be used to heat the mixture.

Formula: Beta naphthol (technical grade) 25 pounds.
Lubricating oil (Red Engine type, 100-150 viscosity) 4.6 gallons.

Mixing: Mix the oil and beta naphthol in the container and heat until the beta naphthol has dissolved and a temperature of 259° to 266° F. is reached. Keep the temperature within this range throughout the dipping process.

Use a Thermometer: Secure a thermometer with a range of—30° F. to 300° F. Keep it suspended in the container while dipping bands.

Dipping: Dip the roll of bands into the solution with roll flat, tubes vertical, allowing the solution to come up to about 1/4 inch of the top of roll, remove as quickly as possible, invert so that top side is down, and place on drain so that the material will run back into the container. Allow the band to remain on drain until dry and then dip the other side in same manner. Be careful. Beta naphthol irritates the nose and eyes.

Time to place bands on trees: The bands should be placed on the trees before the 15th of June, and should be allowed to remain there until winter, then removed and burned. Never place a band on a tree that has not been thoroughly scraped as such procedure is a waste of time and money. Use 3/4 inch cut bill poster tacks, basket staples or short, large-headed nails. Fit band to curving surfaces of the tree, corrugated side of band against the tree, and about 18 inches from the ground. Use leather gloves in working with bands, as some skin irritation may result.

Cold Dipped Bands

Cold dipped beta napthol bands, when treated correctly, give good results; no heat is used in their manufacture which eliminates the possibility of getting burned.

Formula: Beta naphthol (technical grade) 25 pounds
Lubricating oil (200-400 viscosity) 4.6 gallons.

Mixing: Grind the beta naphthol finely, and mix thoroly with the oil, preferably with a mechanical mixer. When ready to dip bands add 1 pint of gasoline to each two pounds of the above mixture, stir thoroughly before dipping and continue the agitation while the bands are being dipped. Submerge the bands for approximately thirty seconds, remove and place on drain board.

For further specific information regarding chemically treated codling moth bands, write to the Department of Entomology, College Park, Maryland

FRUIT WEIGHT AND FREIGHT RATE

On April 30, the Trunk Line Freight Association met in New York to discuss the proposal to increase the freight rate on peaches, by considering a bushel of peaches as weighing 52 pounds instead of the present 50 pounds. Mr. W. S. Campfield, Secretary of the Eastern Apple Growers' Council, represented the Horticultural Societies, ably assisted by Mrs. J. W. Willen of Martinsburg, W. Va. The weight of peaches was *not* increased and remains at 50 pounds.

Freight representatives of seven railroads of the Cumberland-Shenandoah Section met with representatives of the W. Va., Va., Md., and Pa., Horticultural Societies, in Washington, on April 29. The discussion centered on reduced freight rates on apples to southern points. No promises were made, but the question will be passed upon by the Trunk Line Freight Association at a later date.

MICE

Everybody has noticed the many mouse burrows in the orchard. Some growers have also regretfully noticed girdled trees, and possibly such trees may be saved by immediate bridge grafting or inarching. Write A. F. Vierheller, College Park, for instructions regarding these grafting methods.

Meanwhile poison the mice by dropping about a teaspoonful of poison grain bait in 3 or 4 burrows around the tree. Possibly good cultivation will drive the mice away, but maybe not. Some growers cannot cultivate at present. Better get busy with the poison bait, and keep it up for a few weeks. Mice are always a threat, no matter what the season.

OUR ADVERTISERS

Do you read the ads carefully? Our advertisers help to keep the "Maryland Fruit Grower" going. They are reliable. They are selling products that are reliable. They want your business. Give them a chance to supply your needs. They patronize us and can continue to do so only so long as their patronage brings them reasonable returns in business. Look over the ads in back numbers. Tell them that you saw the ad in this publication. Let's show them that we appreciate their business.

1935 *REPORTS*

The reports of the 1935 meetings of the Society have been mailed to paid-up members. Did you get yours? Why not send in those dues? Have you secured any new members for the Society? We can survive or grow only in proportion to the team-work of the members.

OBSERVATION

A survey of 75 orchards in New Jersey, by Messrs. Driggers and McLean showed almost invariably that the amount of spray material per square inch of leaf surface was about 1/3 to 1/2 in the top third of the tree as in the bottom third. It is suggested that the top of the trees be "topped off" with sufficient spray to control scab and codling moth which are known to be found a little more serious in the tree top and center. ("Success and Failure in Spraying for Scab and Codling Moth", Michigan Special Bulletin No. 230, 1933, Mich. Agr. Exp. Station, East Lansing, Michigan).

Prof. A. J. Farley, further reports on the New Jersey work (1934 Transactions of the Peninsula Horticultural Society) by stating that rains wash the lead arsenate spray from the upper part of the tree, showing that better stickers are yet to be found to prevent rapid leaching away of lead sprays.

Professor Marshall of the Department of Entomology of Purdue University found as many as 416 codling moth cases in one square yard of soil under an apple branch which touched the ground by the time the fruit was half harvest size. This means that if codling moth worms can crawl off those low-hanging limbs and spin up on the ground, codling moth bands will not be very effective. The worms won't crawl from the end of a limb to the tree trunk to commit suicide in a tree band, if its a shorter walk down a branch that touches the ground.

The doctor was examining school children. One youngster was under weight.

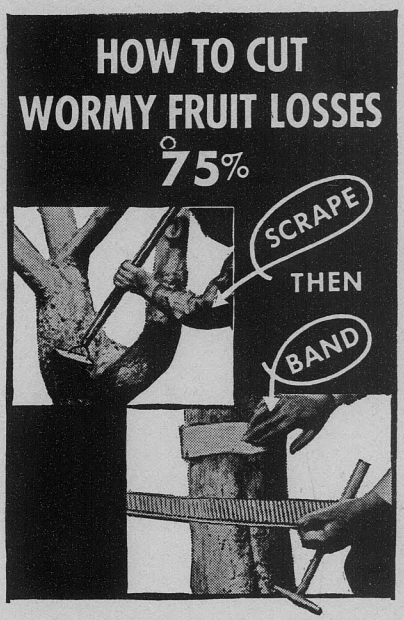
"You don't drink milk?"

"Nope."

"Live on a farm and don't drink milk at all?"

"Nope, we ain't hardly got enough for the hogs."

TREE BANDING PAYS PROFITS . . .



To Kill Codling Moth back up spraying with

Tree Bands . .

Beta Naphthol bands bill the worms your spraying misses. From 50% to 87% of the worms on a tree enter the bands and *are killed.*

The U. S. Department of Agriculture and your State Experiment Station say, "Band your trees for more effective codling moth control."

American Cyanamid & Chemical Corporation does not make tree bands. But we supply Aero Brand Beta Naphthol and Cod-Ban to reputable tree-band manufacturers in every apple section.

FREE. Send your name and address for free leaflet giving complete instructions for preparing trees for banding and name of nearest tree-band manufacturer.

AMERICAN CYANAMID & CHEMICAL CORP.
Insecticide Department
30 Rockefeller Plaza **New York, N. Y.**

COD-BAN (Trade Mark) FOR COLD DIP TREE BANDS

BETA NAPHTHOL AERO BRAND FOR HOT DIP TREE BANDS

Meanwhile poison the mice by dropping about a teaspoonful of poison grain bait in 3 or 4 burrows around the tree. Possibly good cultivation will drive the mice away, but maybe not. Some growers cannot cultivate at present. Better get busy with the poison bait, and keep it up for a few weeks. Mice are always a threat, no matter what the season.

OUR ADVERTISERS

Do you read the ads carefully? Our advertisers help to keep the "Maryland Fruit Grower" going. They are reliable. They are selling products that are reliable. They want your business. Give them a chance to supply your needs. They patronize us and can continue to do so only so long as their patronage brings them reasonable returns in business. Look over the ads in back numbers. Tell them that you saw the ad in this publication. Let's show them that we appreciate their business.

1935 *REPORTS*

The reports of the 1935 meetings of the Society have been mailed to paid-up members. Did you get yours? Why not send in those dues? Have you secured any new members for the Society? We can survive or grow only in proportion to the team-work of the members.

OBSERVATION

A survey of 75 orchards in New Jersey, by Messrs. Driggers and McLean showed almost invariably that the amount of spray material per square inch of leaf surface was about 1/3 to 1/2 in the top third of the tree as in the bottom third. It is suggested that the top of the trees be "topped off" with sufficient spray to control scab and codling moth which are known to be found a little more serious in the tree top and center. ("Success and Failure in Spraying for Scab and Codling Moth", Michigan Special Bulletin No. 230, 1933, Mich. Agr. Exp. Station, East Lansing, Michigan).

Prof. A. J. Farley, further reports on the New Jersey work (1934 Transactions of the Peninsula Horticultural Society) by stating that rains wash the lead arsenate spray from the upper part of the tree, showing that better stickers are yet to be found to prevent rapid leaching away of lead sprays.

Professor Marshall of the Department of Entomology of Purdue University found as many as 416 codling moth cases in one square yard of soil under an apple branch which touched the ground by the time the fruit was half harvest size. This means that if codling moth worms can crawl off those low-hanging limbs and spin up on the ground, codling moth bands will not be very effective. The worms won't crawl from the end of a limb to the tree trunk to commit suicide in a tree band, if its a shorter walk down a branch that touches the ground.

The doctor was examining school children. One youngster was under weight.

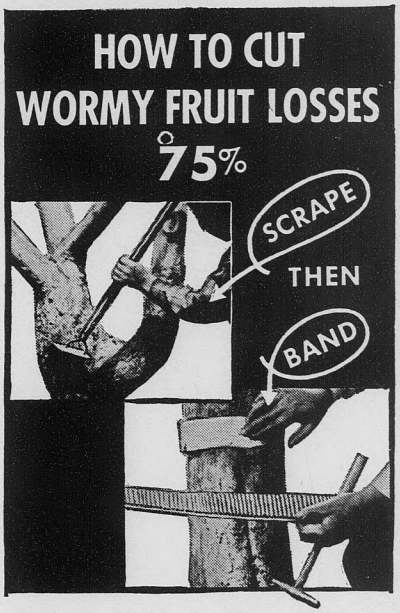
"You don't drink milk?"

"Nope."

"Live on a farm and don't drink milk at all?"

"Nope, we ain't hardly got enough for the hogs."

TREE BANDING PAYS PROFITS . . .



To Kill Codling Moth back up spraying with

Tree Bands . .

Beta Naphthol bands bill the worms your spraying misses. From 50% to 87% of the worms on a tree enter the bands and *are killed.*

The U. S. Department of Agriculture and your State Experiment Station say, "Band your trees for more effective codling moth control."

American Cyanamid & Chemical Corporation does not make tree bands. But we supply Aero Brand Beta Naphthol and Cod-Ban to reputable tree-band manufacturers in every apple section.

FREE. Send your name and address for free leaflet giving complete instructions for preparing trees for banding and name of nearest tree-band manufacturer.

AMERICAN CYANAMID & CHEMICAL CORP.
Insecticide Department
30 Rockefeller Plaza **New York, N. Y.**

COD-BAN (Trade Mark) FOR COLD DIP TREE BANDS

BETA NAPHTHOL AERO BRAND FOR HOT DIP TREE BANDS

NEW! Improved SUMMER SCALECIDE

Just what you have been looking for

Increased Toxicity with Safety
Better Codling Moth Control.

Spreads the arsenicals evenly and smoothly without sticking and gumming at picking time.

May be used immediately before or after lime sulfur or combined with Sulfocide.

Combines with nicotine sulphate for first or second brood codling moth spray.

If you do not wash your fruit, New Improved Summer Scalecide makes it possible to brush off arsenate of lead.

If you wash, New Improved Summer Scalecide allows the arsenate of lead to come off as easily as if you used no summer oil at all.

Lowest Cost Summer Oil

Write today for new codling moth spray program.

WRITE FOR NEW CIRCULAR
BROWN ROT CONTROL
for Peaches, Cherries and Plums.
Also extends the keeping quality in transit and on Road-side Stand.

B. G. PRATT COMPANY

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50 Church Street **New York, N. Y.**